REMARKS

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached Appendix is captioned "**Version with Markings to Show Changes Made.**"

As a preliminary matter, Applicants amended FIGS. 88b and 111 to correct minor informalities, and submit that no new matter is being added. In particular, the amendment of FIG. 88b is supported on page 136, lines 17-19, and the amendment of FIG. 111 is supported on page 15, lines 21-24. Accordingly, Applicants respectfully request the Examiner's approval of the amendments of FIGS. 88b and 111, and a separate Letter to the Draftsperson is enclosed.

As yet another preliminary matter, Applicants request clarification of the current status of claim 4, with regard to its allowability. Since this claim has not been rejected and has not been cancelled, Applicants will assume that this claim contains allowable subject matter.

As yet another preliminary matter, Applicants amended claim 5 to correct minor informalities, without narrowing its scope, since the amendment constituted merely cosmetic changes. Accordingly, Applicants respectfully request consideration of amended claim 5.

The drawings are objected to for not designating a Prior Art legend in FIGS. 104-114c. In response, Applicants accordingly amended FIGS. 104-114c, as requested by the Examiner, and a separate Letter to the Draftsperson is enclosed.

Claims 1 and 4 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In response, Applicants amended claims 1 and 4 to clarify the features of the present invention, without narrowing their scope, since the amendments are merely cosmetic changes. Accordingly, Applicants respectfully request that the §112 rejection of claims 1 and 4 be withdrawn.

Claim 5 stands rejected under 35 U.S.C. §102(a) as being anticipated by Applicants' Prior Art FIG. 111. Applicants respectfully traverse because the cited reference does not disclose (or suggest) the feature of "wherein an external peripheral end of the frame-shape structure and an external peripheral end of the black matrix picture-frame are formed to coincide with each other viewing from a perpendicular direction to the substrates," as recited in amended claim 5. In particular, because an external peripheral end of the frame-shape structure 1111 is arranged inside an external peripheral end of the BM picture frame viewed from a direction vertical to the surface of the substrate 1116, as described on page 15, lines 21-24, the external peripheral end of the frame-shape structure 1111 and the BM picture frame 1108 do not coincide with each other. In other words, the external peripheral end of the BM picture frame 1108 must be longer than the external peripheral end of the frame-shape structure 1111 so it can be inside of each other. Thus, FIG. 111, as described in the

specification, cannot disclose the external peripheral end of the frame-shape structure and the external peripheral end of the black matrix picture-frame being formed to coincide with each other viewing from a perpendicular direction to the substrates, as recited in amended claim 5. However, FIG. 111 did not accurately depict the descriptions in the specification. Thus, Applicants amended FIG. 111 to more clearly depict the descriptions found in the specification. Accordingly, Applicants respectfully submit that the §102 rejection of claim 5 has been traversed, and request that the rejection be withdrawn.

Claims 17-19 stand rejected under 35 U.S.C. §102(b) as being anticipated by Eiji (JP406202121A). Applicants respectfully traverse because the cited reference does not disclose (or suggest) a plurality of structures formed inside the display area for controlling spreading of dropping liquid crystal, as recited in claim 17, and a convex shape structure provided in a frame shape between the sealing material and the display area, as recited in clam 19. In particular, none of the figures in the cited reference disclose the plurality of structures, as recited in claim 17, and the convex shape structure, as recited in claim 19. Moreover, it does not appear that the Examiner specifically addressed the feature of the plurality of structures recited in claim 17 (FIG. 61-66) in the Office Action. Thus, Applicants respectfully request that the Examiner explain which features in the cited reference that he believes correspond to the plurality of structures formed inside the display area for controlling spreading of dropping liquid crystal, as recited in claim 17.

On the other hand, although the Examiner asserted that the structure of 15

disclosed in the cited reference corresponds to the convex shape structure, as recited in claim 17, Applicants respectfully submit that the structure 15 is not of a convex shape. According to the Webster's Revised Unabridged Dictionary, © 1996, 1998 MICRA, Inc., convex is defined as rising or swelling into a spherical or rounded form (copy enclosed). Similarly, WordNet ® 1.6, © 1997 Princeton University, defines convex as curving or bulging outward (copy enclosed). Thus, as defined, the word "convex" is defined by a rounded form or some curvature. However, structure 15 of the cited reference is not rounded or curved. Rather, corners of a rectangle are shown by structure 15 of the cited reference. Accordingly, Applicants respectfully request that the §102 rejection of claims 17 and 19 be withdrawn.

Since claim 18 depends upon claim 17, it necessarily includes all of the features of its associated independent claim plus other additional features. Thus, Applicants submit that the §102 rejection of claim 18 has also been overcome for the same reasons mentioned above to overcome the §102 rejection of independent claim 17. Applicants respectfully request that the §102 rejection of claim 18 also be withdrawn.

Claim 20 stands rejected under 35 U.S.C. §102(e) as being anticipated by Matsushima (U.S. Patent No. 6,391,137). Applicants respectfully traverse because the cited reference does not disclose (or suggest) "a hollow frame-shape sealing material formed at an external periphery of the sealing material for functioning as a suction in an atmosphere," as recited in claim 20. In one embodiment shown on FIGS. 90a-90c, a hollow frame-shape sealing material 346 is formed at *an external periphery* of a sealing material 6. Liquid

crystals are dropped only on the display area 10 inside the sealing material 6, and not dropped inside the frames of the sealing materials 346 (Applicants' specification, page 140, lines 12-15). The hollow frame-shape sealing material 346 functions as a suction in an atmosphere (Applicants' specification, page 140, lines 17-20).

In contrast, in the Matsushima reference, the sealing material 3 is placed inside the sealing material 4, instead of an external periphery of the sealing material 4 (FIG. 12). Moreover, liquid crystal injection holes 3a are provided on parts of the surrounding regions b of the frame-shaped sealing material 3 for injecting liquid crystal (FIG. 12, Col. 2, lines 1-4), while a ventilation hole 4a is provided on part of the periphery sealing material 4 (Col. 2, lines 4-6). Thus, not only is the structure of the sealing material 3 of the cited reference different from the hollow frame-shape sealing material relating to the sealing material, as recited in claim 20, the sealing material 3 of the cited reference also has a very different function from the hollow frame-shape sealing material of the present invention. Accordingly, Applicants respectfully request that the §102 rejection of claim 20 be withdrawn.

Claims 1-3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nagayama (U.S. Patent No. 6,384,882) in view of Shuichi (JP 11-015007). The rejection of claim 3 is now moot, since Applicants cancelled claim 3, without prejudice. However, with respect to claims 1 and 2, Applicants respectfully traverse because the cited references do not disclose or suggest a blue-colored layer formed at an area of a shading film, wherein the blue

colored layer *contacts* the sealing material, as recited in claim 1. More specifically, FIGS. 2 and 5 disclose a sealing material 4 that directly contacts the red-coloring layer 25R. As a result, contrary to the Examiner's assertion, the sealing material 4 of the cited reference is not in contact with the blue-colored layer, as recited in claim 1. Accordingly, Applicants respectfully request that the §103 rejection of claim 1 be withdrawn.

Since claim 2 depends upon claim 1, it necessarily includes all of the features of its associated independent claim plus other additional features. Thus, Applicants submit that the §103 rejection of claim 2 has also been overcome for the same reasons mentioned above to overcome the §103 rejection of independent claim 1. Applicants respectfully request that the §103 rejection of claim 2 be withdrawn.

Claims 6-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's Prior Art FIG. 111 in view of Takuya (JP 11-119230). Applicants respectfully traverse because the cited references do not disclose or suggest a first frame-shape structure, a second frame-shape structure, perpendicular alignment films and a black matrix picture-frame, as recited in claims 6-8. In particular, the structures 43a, 43b do not correspond to the first and second frame shape structure, because structures 43a, 43b are simply pillars for holding the gap of the liquid cell at the time of the fixing of the seal agent 44, as described in the Abstract of the cited reference. Moreover, although there are no translated descriptions of the structures 30, 30a and 62, Applicants believe that these structures do not correspond to the perpendicular alignment films and the black matrix picture-frame, as asserted by the

Examiner. If the Examiner wishes to maintain this rejection, perhaps he can provide Applicants with an English translation of the Takuya reference.

Furthermore, since claims 6-8 depend upon claim 5, they necessarily include all of the features of their associated independent claim plus other additional features. Thus, Applicants submit that the §103 rejection of claims 6-8 has also been overcome for the same reasons mentioned above to overcome the §102 rejection of independent claim 5. Accordingly, Applicants respectfully request that the §103 rejection of claims 6-8 be withdrawn.

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Nagayama (U.S. Patent No. 6,384,882) in view of Shuichi (JP 11-015007). Applicants respectfully traverse because the cited references do not disclose or suggest a light-reflection layer having a concavo-convex structure which has inclined surfaces and is formed in an area contacting with the sealing materials of at least one of the two substrates, as recited in claim 9.

As previously explained, convex is defined as rising or swelling into a spherical or rounded form (Webster's Revised Unabridged Dictionary, © 1996, 1998 MICRA, Inc.), or convex being defined as curving or bulging outward (WordNet ® 1.6, © 1997 Princeton University). Thus, as defined, the word "convex" is defined by a rounded form or some curvature. However, structure 14a of the cited reference is not rounded or curved, instead sharp rectangular corners are shown. Furthermore, since an orientation film 16 and an

insulating film 15 are formed in-between the structure 14a and the sealing material 19, the structure 14a is not in contact with the sealing material. Thus, contrary to the Examiner's assertion, the structure 14a does not correspond to the light-reflection layer having a concavo-convex structure, as recited in claim 9. Accordingly, Applicants respectfully request that the §103 rejection of claim 9 be withdrawn.

For all of the above reasons, Applicant respectfully requests reconsideration and allowance of all pending claims. The Examiner should contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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December 2, 2002

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convex

\Con"vex\, a. [L. convexus vaulted, arched, convex, concave, fr. convehere to bring together: cf. F. convexe. See Vehicle.] Rising or swelling into a spherical or rounded form; regularly protuberant or bulging; -- said of a spherical surface or curved line when viewed from without, in opposition to concave.

Drops of water naturally form themselves into figures with a convex surface. --Whewell.

Double convex, convex on both sides; convexo-convex.

Source: *Webster's Revised Unabridged Dictionary, © 1996, 1998 MICRA, Inc.*

convex

adj : curving or bulging outward [syn: bulging] [ant: concave]

Source: *WordNet ® 1.6, © 1997 Princeton University*

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 1, 4, 5, 9, 17, 19 and 20 have been amended as follows:

1. (Amended) A liquid crystal display ~~having~~ comprising:

a sealing material ~~made of~~ having a photo-curing type material for sealing liquid crystal sandwiched between two substrates, ~~comprising:~~wherein the photo-curing type material has a light reactive area in a wavelength of blue color band; and

a blue-colored layer formed at an area of a shading film, ~~contacting with~~ wherein the blue-colored layer contacts the sealing material~~; and~~

~~a light reactive area for a wavelength of blue color band characterized in the photo-curing type material of the sealing material.~~.

Claim 3 is cancelled without prejudice.

4. (Amended) A liquid crystal display ~~having~~ comprising:

a sealing material made of a photo-curing type material sealing liquid crystal sandwiched between two substrates; ~~comprising:~~

a shading film formed on one of the two substrates;

a transfer ~~added~~ having colored particles, formed at the lower portion of the shading film, and electrically connected to the two substrates; and

a light incident hole opened at the shading film above the transfer.

5. (Amended) A liquid crystal display comprising:

two substrates sandwiching liquid crystal and opposing to each other;

a main seal attaching the two substrates at an external peripheral portion of a display area of the substrates;

a frame-shape structure formed in the area between the main seal and the display area; and

a black matrix picture-frame shading an area between the main seal and the display area;

wherein an external peripheral end of the frame-shape structure and an external peripheral end of the black matrix picture-frame are formed to ~~be~~ coincide with ~~to~~ each other viewing from a perpendicular direction to the substrates.

9. (Amended) A liquid crystal display ~~having~~ comprising:

a sealing material made of a photo-curing type material sealing liquid crystal sandwiched between two substrates; ~~comprising~~

a light-reflection layer having a concavo-convex structure which has inclined surfaces and formed in an area contacting with the sealing materials of at least one of the two substrates.

17. (Amended) A liquid crystal display comprising:

~~sealing liquid crystal by attaching opposing~~ two substrates attached opposing each other;

~~using~~ a sealing material formed outside ~~of~~ a display area ~~forming~~ having a plurality of pixels for sealing liquid crystal between two substrates, and

~~comprising~~ a plurality of structures formed inside the display area ~~sealing material~~ for controlling spreading of dropping liquid crystal.

19. (Amended) A liquid crystal display comprising:

~~sealing liquid crystal by attaching opposing~~ two substrates attached opposing each other;

~~using~~ a sealing material formed outside ~~of~~ a display area having ~~forming~~ a plurality of pixels for sealing liquid crystal between the two substrates; and

~~comprising~~ a concave shape structure provided in a frame shape ~~inside~~ between the sealing material and ~~outside~~ the display area, at least on one of the two substrates.

20. (Amended) A liquid crystal display comprising:

~~sealing liquid crystal by attaching opposing~~ two substrates attached opposing each other;~~using~~

a sealing material formed outside ~~of~~ a display area having ~~forming~~ a plurality of pixels for sealing liquid crystal between the two substrates; and

~~further comprising~~ a hollow frame-shape sealing material formed at an external periphery of the sealing material for functioning as a suction in an atmosphere.